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ABSTRACT

This report describes the development and implementation of a place-based curriculum for a small charter high school of 25 students in Wisconsin. The curriculum involved 100 days of field studies in local places such as historical archives, a restored wetland, a river valley, and a senior citizen community center. The students worked with 60 professionals and community members over the year, integrating learning into interdisciplinary courses. The students, who reflected a wide range of skills, abilities, and backgrounds, worked together, as in a one-room schoolhouse. The Iowa Test of Educational Development was taken in September and June. In each section of the test there was significant improvement, and the composite score jumped almost three grade levels over the year. Four reasons are advanced as to why these students scored so well. First, being together every day created a learning community. Students' investment in learning cultivated positive attitudes toward learning. Second, the variety of community settings became readily accessible anchors of memory, helping students to retain learning. Third, the many first-hand experiences were critical to students' learning. Finally, because the projects were relevant to the community, and because students understood that family, friends, and neighbors would view their work, an audience of accountability was created that exerted favorable pressure on student skills and abilities. A table presents pre- and post-test scores in eight subject areas. (TD)

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ED 459 023

100 Days of Learning in Place

How A Small School Utilized 'Place-Based' Learning To Master State Academic Standards.

By James Lewicki

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A Report for the Rural School and Community Trust
June 2000

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Spring 2000

Dear Reader,

Recently, I was given a rich opportunity to develop and implement a place-based curriculum for a small charter high school. Learning in place meant over 100 full days of study at various community sites. Twenty-five courageous high school students devoted their energy to the work of the Kickapoo River Institute. This booklet hopes to capture a small, though key weave of that memorable tapestry. Learning in the community works and, moreover, it works well enough for students to master complex state standards.

My deepest gratitude to the students of KRI: Sandi, Kathy, Mag, Ali, Erin, Josh, Kelly, Israel, Jenny, Marley, Hadley, Chris, Lucas, Isaac, Tim, Matt, Ximena, Zach, Noah, Orion, Sam, Libby, Jessica, Megan and Carrie, for all they gave and, as graduating seniors this spring and next - will continue giving to others, selflessly.

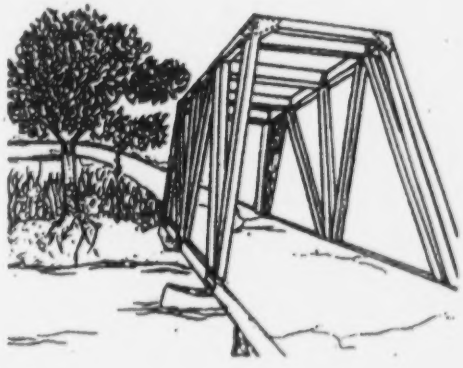
"Place-based learning activates our passions, draws emotions up alongside our intellect, and forces action consistent with our beliefs."
-James Lewicki

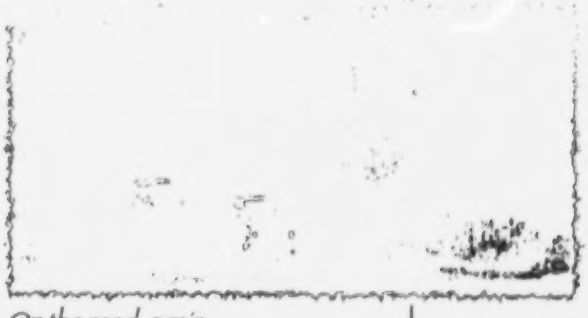
Many thanks to the various adults who contributed to this journey; from community members who contributed to the curriculum, to colleagues and the KRI Council who supported the vision, to North Crawford's administrative and School Board leadership, and utmost to each parent who believed in this innovative effort for the education of their son or daughter. Finally, a heartfelt thanks to Sarah and Sylvia, who gave so much to this evolving year, and supported the students in priceless ways.

And my love to Renee and our children Aurian, Hana, Cora, Jamie and Sabrina, who nurtured a very intensive year with their love and understanding. I hope the work we undertook; spending countless hours in the rain, snow, wind and sun; countless moments in the wetlands, museums, parks and communities, provides a glimpse into the possibilities of learning in place.

Sincerely,

James Lewicki





On the road, again.

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Photos by James Lewicki, Sylvia Attelson
Illustrations by Aurian Lewicki, Corinna Knapp

Imagine teaching in a high school without walls. Imagine instructing a small group of diverse freshman and sophomores limited only by the learning resources and people of your community, region and state. Imagine 100 days of field studies - studying the history, ecology, and culture of home, whether historical archives, restored wetland, or senior citizen community center. Imagine working with sixty professionals and community members over the year, integrating learning into interdisciplinary courses titled Nature and Technology; Energy, Ecosystems and Economics; and The Kickapoo Valley: A BioRegional Map.

Finally, imagine giving these students the Iowa Tests of Educational Development to assess if this kind of learning, this 'Pedagogy of Place', would make a difference in a conventional assessment.

What will you find from a Pre-Test/Post-Test design?

Will students score well in Science by working closely with biologists on a wetlands restoration project?

Will students score well in Social Studies by working closely with historians, conducting research in archives and presenting their findings at a history conference?

Will students score well in Math by computing the flow rate, volume and drift of the Kickapoo River?

Will students score well in Language Arts by the consistent and constant application of oral and written skills in deadline-oriented tasks?

In effect, will students, when working in a small school setting and learning in the community, meet or exceed statewide standards, as measured by a nationally recognized test? Do place-based units hold a unique 'quality of permanence' that is readily accessible during a testing time?

I recently had the unique experience of establishing, and then teaching in a small charter high school that spent over 100 days learning in the community. Students learned together, like a one-room schoolhouse, for over nine months. These students reflected the widest range of skills, abilities, and backgrounds. Some were gifted and some were at-risk; several students even scored at college levels on certain sub-sections of the pre-test; and several scored at early elementary levels. Some were model students; some during the previous year were constantly in detention or suspended. Some had recently graduated from a K-8 private Waldorf school, some had been homeschooled, and a majority had been in public school since Kindergarten.

Geology hike

An experiment in place-centered education, I'm going to teach a course on the local watershed: the Black River. You could teach the same kind of course using a seashore, an island, a mountain, or a desert. I want to immerse students in a natural system. Water engages all of our senses. We drink it. Some people are baptized in it. We swim in it, bathe in it, listen to the sound of it. A river is a biological thing, a geological thing, a social thing, a legal artifact defined by laws and regulations, and it has a history. A course on a river acts as a good solvent for compartmentalized knowledge.

- David Orr

State Archives Manuscript Room

"Just as a pile of stones is not a house, an accumulation of facts and equations is not knowledge."

- Jules Henri Poincare

What kind of work took us into the community for 100 days? Here is a small sampling of projects we undertook:

- Researched the Civil War veterans from the Valley.
- Answered the question: Did the Kickapoo Indians ever actually live in the Kickapoo Valley?
- Built picnic tables and benches for the community.
- Worked with the Department of Natural Resources and a private landowner to monitor changes at a 250-acre wetland restoration project.
- Created art pieces reflecting the natural and cultural heritage of home; wrote poetry perched atop a sunswept limestone outcropping overlooking a pre-historical site.
- Discovered the geological history of the area and the river's changing course through investigation and analysis of 100 years of archival maps and recent aerial photographs.
- Found the source of the Kickapoo River and hiked, canoed, and biked 100 miles to its confluence with the Wisconsin River.

Wisconsin State Historical Society

During this eventful year of learning, as one means of assessment these students were given the Iowa Test of Educational Development in September and a post-test in June. This paper examines the results of these tests and proposes several thoughts on why place-based learning became a potent means of learning.

A concern seldom voiced but readily believed by educators, is that a non-classroom environment does not measure up to the rigor of a traditional classroom. The thinking goes like this...field trips are good for the spirit of the students and provide an enrichment experience, but, too many trips away from school dilute the curriculum. It takes time away from classroom teaching. With the force of testing, standards, and grade equivalent scores constantly knocking on my class door, how am I supposed to justify opening that door and leaving my chalkboard, overhead, and textbook world behind, entering the community day after day? Isn't this risking the wherewithal of my students to meet state standards? I don't believe this. My experience says otherwise - and though one year is hardly enough to warrant a definitive answer, it raises questions to be examined.

"The significant problems we face cannot be solved at the same level of thinking we were at, when we created them."

– Albert Einstein

Below are scores for the fourteen freshmen who learned their Social Studies, Science, English, and Math through place-based teaching.

N=14 Freshman	Grade Equivalent Pre-Test:	Grade Equivalent Post-Test
Science	10.6	13.6
Social Studies	9.3	12.2
Reading	10.4	12.7
Math	8.5	12.6
Writing	8.5	12.4
Sources of Information	8.2	11
Literary Skills	10.3	12.8
Composite: Grade Equivalent	9.8	12.5

The most remarkable piece is how the composite score (all subjects combined) jumped almost three grade levels. In each section there is a distinct pre/post movement that seems to connect strongly to the learning in the community.

The Science section moved from 10.6 grade level equivalent to 13.6. This 13.6 is the highest overall post-test section score. One of its sub-sections; *evaluating and analyzing information* increased from a national ranking of 52% to 74%. This makes sense to me understanding how the students kept the field journals, data collection logs, and analysis needed to undertake various steps in their projects.

The Social Studies section increased from 9.3 to 12.2 and its subsection on *interpreting information* leapt 29%. Again, all the primary source research we undertook, the constant seeking of answers, the community documents, artifacts, and people tended to shift a student to a highly responsive role where they learned to discriminate, categorize, and evaluate information for what was essential and what wasn't.

The Sources of Information section jumped almost three grade levels from 8.2 to 11.0. In fact, two subsections increased by over 50%: *library sources* (44% increase to 73%) and *government sources* (54% to 83%). These students had more time in state archives, historical museums, and local libraries than most students spend in their school library the whole year.

Life-long Learning

- Precisely observe, record and analyze data, ever evaluating appropriateness, reliability, and validity.
- Exhibit tenacity as a learner.
- Demonstrate effective collaboration skills, in the pursuit of questions that are pertinent, insightful, and reveal deep understanding.
- Demonstrate a recognition and utilization of dynamic systems and structures.
- Develop the intellectual habits of skepticism and openness.
- Utilize the discipline of deduction.
- Develop the power of intuition.
- Demonstrate the ability to cooperate through a shared dilemma.
- Select problem-solving processes appropriate to a problem.
- Recognize, allow, and seek alternative problem-solving strategies.
- Draw conclusions independent of authority.
- Tolerate ambiguity - and the potential for more than one "correct" answer.
- Develop mathematical relationships based upon empirical data involving multiple variables.

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Organic Farm

Nature...becomes (to man)
the measure of his attainments.
So much of nature as he is
ignorant of, so much of his own
mind does he not yet possess.
And, in fine, the ancient precept
'know thyself'
and the modern precept,
'study nature'
became at last one maxim.

- Emerson

Trout habitat study

In nine months, the composite grade equivalent, increased from the middle of freshman year (9.6) to the end of senior year (12.5). I often wonder why?

What is it about place-based learning that might have influenced these post-testing scores?

What is it about the size and cohesiveness of our learning group itself that contributed to the achievements we all experienced?

Four reasons come to mind why these students scored so well.

1. Size of our learning community shaping attitudes.
2. Anchors of Place
3. Experience
4. Audience and Authentic assignments

Size of our learning community shaping attitudes

First, attitude is always essential for high quality performance in any endeavor. Though diligent in their September pre-test, these students had yet to gel as a learning community. By the June post-test, they were fully connected; hundreds of small and many large events had brought them together as a learning community. They had been together all day, every day, since September. Therefore, they were committed to their experience of place-based learning.

Consequently, a post-test became a means to show their worth, voice their value, and affirm their hard work. This is a far cry from the conventional student attitude toward 'fill in the circle' testing. Because of each student's sincere investment and caring attitude, they read each question carefully, went back over their answers, and brought into play various minor test-taking skills that made a major difference.

Anchors of Place

Second, there existed a great influence that I hadn't foreseen until teaching in the midst of this remarkable year. The tremendous variety of community settings became anchors of memory readily accessible, whether during a conversation or test. When you learn at a museum, hospital, university archives, forest, prairie, or riverbank then the vivid nature of the experience itself works like a mnemonic device, helping retain the learning. This wealth of experience became a depository for future access.

Experience

Third, these students had many first-hand experiences, and many of them were critical to the learning. Remember that experience comes from the Latin ***experiri***, which means to try. To try implies failure, constant self-evaluation, and targeted analysis of what just happened. For example, a microclimate study along the Kickapoo River was a frequent place for temperature, humidity, plant growth, and observation data collection. In the Iowa tests many questions asked each student to analyze experimental procedures; it was fairly easy for them to look back on their many experiments and extrapolate answers for the test. In fact, they scored at a college level on this sub-skill in the science section.

Audience and Authentic Assignments

The last element is critical to the success of place-based learning, and for many, becomes known only after they have journeyed down that road apiece. Audience is key. Because of the nature of the projects - combined with the highly visible aspects of being in the community - audience, like a magnet, drew quality work out of the students. The students understood that family, friends, and neighbors would view their work. Furthermore, the relevancy of projects often had a direct benefit like answering local historical questions, monitoring wetlands, or building an often-used park bench. The result, therefore, was often of the highest quality.

Place-based learning frequently has students asking questions with answers yet to be discovered while conducting projects no one else is doing. This one-of-a-kind work and constant community access becomes an 'audience of accountability' with favorable pressure exerted on the students' skills and abilities.

"For me, the most important place on the farm was the cattail marsh at its north end. To get there, you took the farm's interior road, a grass track that ran east to the edge of the maple grove and then north as far as the waterway that drained into the slough from the east. The physical distance was not quite half a mile, but so far as I was concerned it might have been halfway around the world."

- Paul Gruchow
from Grass Roots: The Universe of Home

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On the last day of school each student took a moment to reflect on learning itself and the Kickapoo Valley, where we had experienced so many school days. Here are two of many exceptional comments that speak to the heart of place-based education.

Wisconsin's Ice Age Trail

Dear Kickapoo Valley,

For the time I have spent in your valleys, among your wooded forests and on your river I would like to thank you...so many wonderful things come from you. My friends, my education and a full year of beauty being introduced to the existence of your range are just a few.

I value your vastness in variety, from the tops of your ridges to the bottom of your streams; your diversity in life is amazing. I respect the communities that live along you for their courage and determination.

They grow bigger, then smaller; enlarge then decline. They survive through tornados, dry summers, long winters, floods and everything else nature throws their way, yet they still are there. They must feel a special connection towards you, like me. Peacefulness on your waters, enlightenment standing on your hills, joy and refreshment hiking throughout your forests will always be something that makes me what I am. For all of this, thank-you. My life has experienced more throughout this year.

Sincerely,
Kelly

"Education is not the filling of a bucket but the lighting of a fire."

- Yeats

Kelly added her thoughts on learning:

Learning is...

Caring and finding truth in something that you can't see. It's listening and watching, viewing and doing. Why someone would not want to learn new things is wrong, you learn them no matter what. What you learn makes you who you are. And you never stop. Learning is an eternal flame that catches everyone in a bonfire of brilliance. To learn is to live life.

Historical photograph archives

Chris, another student, wrote...

An island in time. Perhaps that is what the Kickapoo Valley is, a home to a diverse number of plants, animals, and people. Its rolling hills give a comfort to the different species of the valley. It has been, and will continue to be the place I think of as home. My greatest hope for this valley is that it will never grow to be the jumbling busy atmosphere of a mass-transit metropolis.

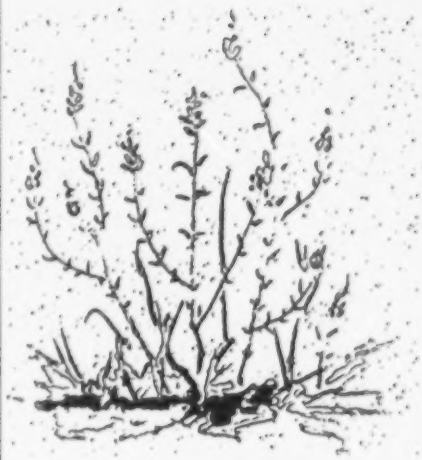
In my mind, the Kickapoo Valley will forever stay a place where the people of the valley live in quiet and community. No matter how far I travel, no matter what corners of the earth I visit; I will always return to the Kickapoo Valley.

As time passes and changes occur it will forever be, to me, a place of small country stores and gravel roads that forever wind through the hills. It will stay in my heart as a place where I learned to love the land, a place where I learned to love the people of the land, and most of all a place I can call home.

Chris spoke to learning as well...

Learning is something - information perhaps - that is passed from one person to another. When you learn something you do not just see or hear something but you experience it. Learning is the knowledge that can only be achieved through complete understanding.

Reading these student pieces many months later, I am still struck how they carry freshness and profound insights. The learning capacity of community is immense. I knew beforehand we would have dynamic and diverse situations; what surprisingly swept over me each day as we ventured into new parts of our community, was wave after wave of serendipitous connections. This new way of learning from one place, constantly led us to new places, immersing the students in a constant stream of learning. And isn't this the essence of curriculum, which comes from the Latin, **currere**, a current.



"And this our life...
Finds tongues in trees,
books in running brooks,
sermons in stones,
and good in everything."

- William Shakespeare

Without risk, faith is an impossibility.

- Soren Kierkegaard

In the midst of winter, I finally learned that there was in me an invincible summer.

- Albert Camus

I steer my bark with hope in the head, leaving fear astern.

- Thomas Jefferson

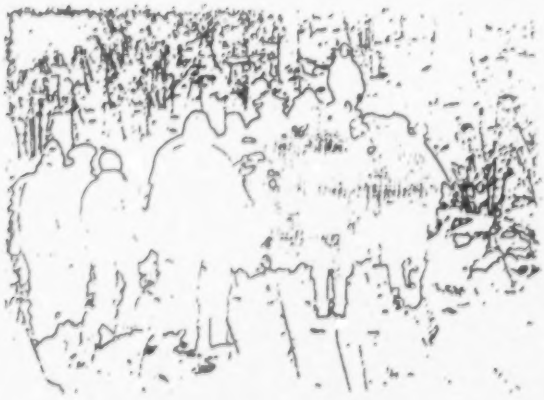
Looking back, I frequently wonder what lessons this intensive experience holds for teachers teaching within the more usual structure of schedules, bells, and three different preps? Few teachers will ever have the flexibility I was given. I understand my experience was very unique, and unlike most high schools. Yet, I'm convinced place-based learning holds much potential even in vastly different formats. One need not spend 100 days, or 50, or even 12 days in the community to benefit. One need not always even be in the community, for the community can enter the school as well. (That's a topic for another paper.)

Community sensibilities must help design the blueprint. What seems essential for place-based education is that each teaching unit is designed with community learning opportunities and issues vitally in mind. Benefits are assured when there is a focused time period with a well-defined community purpose. Tremendous resources exist in our communities and neighborhoods. Once tapped into, they often lead to new resources that impact the evolving place-based curriculum.

We do so many things well, each and every day, in classrooms across America. Incredible learning takes place in school. I was given an opportunity few teachers witness, to move the place of learning into the community arena. The power of learning when community becomes the classroom is beyond compare.

I hope this paper creates ideas in your mind that may initiate opportunities for your teaching to take a move in this direction. Linking your school with a place called home will pay endless dividends, planned and unplanned.

Canoeing the Kickapoo River

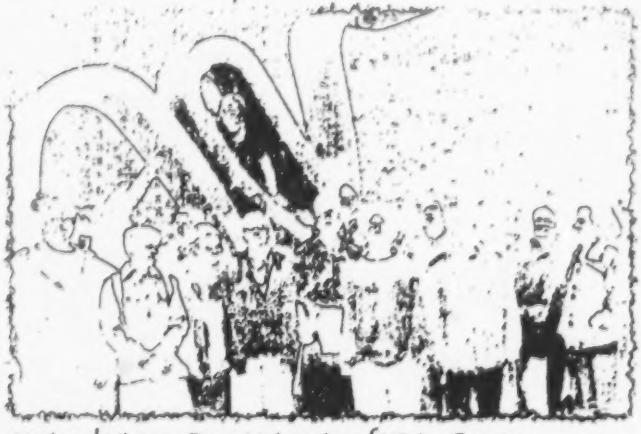


Nature Conservancy winter hike to a hogback prairie.

Subject and Skills	National Norms Pre Test	Post-test	% Increase
Science			
Interpret Information	48	59	23
Analyze Experimental Procedures	54	69	28
Analyze and Evaluate Information	52	74	42
Social Studies			
Interpret Information	45	58	29
Analyze Experimental Procedures	51	57	11
Analyze and Evaluate Information	46	57	24
Sources of Information			
Using Sources	48	60	25
Evaluating sources	56	72	29
Book/Library sources	41	62	51
Dictionaries	44	73	66
Encyclopedia	56	68	21
Miscellaneous References	59	72	22
Map/Atlas/Globes	66	77	17
Government sources	54	83	54
Periodical Guides	37	30	-19
Thinking Skills			
Focus/Information gathering	44	53	21
Remembering	51	62	26
Organizing	36	50	39
Analyzing	51	63	24
Generating	52	65	25
Integrating/Evaluating	56	66	18
Content Area Reading			
Factual Meaning	65	71	10
Inferential Meaning	50	65	30
Evaluative Meaning	49	66	35
Vocabulary	67	73	8
Writing			
Capitalization/Punctuation	43	58	35
Usage/Grammar	65	78	20
Sentence Structure	54	67	20
Organization of Ideas	35	63	51
Expression	54	70	23
Spelling	38	48	26
Quantitative Thinking			
Understanding Concepts	29	49	69
Interpret Information	28	39	36
Solving Problems	41	60	46
Literary Materials			
Literary Meaning	68	71	4
Non-literal Meaning	31	58	87
Inferential Meaning	62	72	16
Generalizing Themes	63	80	27
Literacy Techniques	56	63	13

"And it is well to remind ourselves that education as such has no aims. Only persons, parents, and teachers, etc., have aims, not an abstract idea like education. And consequently their purposes are indefinitely varied, differing with different children, changing as children grow and with the growth of experience on the part of one who teaches. Even the most valid aims which can be put in words will, as words, do more harm than good unless one recognizes that they are not aims, but rather suggestions to educators as to how to observe, how to look ahead, and how to choose in liberating and directing the energies of the concrete situation in which they find themselves."

- John Dewey,
Democracy & Education, 1916



National History Day, University of WI-La Crosse

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Have you ever...?

Have you ever stopped to look,
to see what you could see?
Have you ever really wondered,
what maybe could be?
Have you ever sneaked a glance,
at wild birds in the sky?
Have you ever seen a stand of oaks
and stopped to wonder why?

Have you ever seen a river,
a winding off afar?
Have you ever walked upon a ridge,
and wondered where you are?

Have you ever counted colors,
as you strolled along the way?
Have you ever witnessed fall,
and its colorful array?

Have you ever stopped to look,
to see what you could see?
Have you ever really wondered,
how it changes you and me?

Sandi Schwert

THE RURAL SCHOOL AND COMMUNITY TRUST (www.ruraledu.org)

The Rural Trust is a nonprofit educational organization dedicated to enlarging student learning and improving community life by strengthening relationships between rural schools and communities and engaging students in community-based public work.

Through advocacy, research, and outreach, the Rural Trust strives to create a more favorable environment for rural schooling, for student work with a public audience and use, and for more active community participation in schooling. Founded as the Annenberg Rural Challenge in 1995, the Rural Trust today works through regional networks with more than 700 rural elementary and secondary schools in 35 states.

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